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Montagnais NHC

Reprinted for private circulation from
ECONOMIC DEVELOPMENT AND CULTURAL CHANGE
Vol. IV, No. 4, July 1956
PRINTED IN U.S.A.

TAPPERS AND TRAPPERS: PARALLEL PROCESS IN ACCULTURATION[1]

I. The Problem

The purpose of this paper is to show how two cases of acculturation exemplify parallel processes of culture change, that is, cross-cultural regularities of function and causality, even though differences in outward form and substantive content are such that the acculturation might also be considered as convergent development.

As subsequent sections will show in detail, the Mundurucú of the Tapajós River in Brazil and the Northeastern Algonkians in Canada differed during pre-contact times in social structure, in the general nature of their culture, and in their cultural ecological adaptations. The first were tropical forest hunters and horticulturalists living in semi-permanent villages and given to warfare. The second were hunters of large migratory game and were loosely organized in nomadic bands. Despite these differences, however, both represented roughly the same level of sociocultural integration. That is, individual families were related to one another through certain supra-familial patterns--village activities in the one case and band functions in the other--but the local unit in each instance was politically autonomous.

Since this paper is essentially an illustration of methodology, it is important to stress that the concept of level does not classify cultures according to concrete and substantive form and content. Different cultures may be wholly unlike in their particulars in that they are the products of distinctive area histories or traditions and of local adaptations to environments. At the same time, the largest integrated and autonomous social units may be of a similar order of inclusiveness. While, therefore, similarity of level must underly formulations of cross-cultural regularities, such similarity alone does not at all imply typological identity. The aboriginal tropical forest Mundurucú and the sub-arctic Algonkian hunters were wholly unlike in most cultural particulars and in social structure, although both were integrated on comparable sociocultural levels.

They were alike, however, in the acculturative processes to which they were subjected and in the final cultural type which is now emerging in both populations. The processes were similar in the special manner in which outside

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1. The acculturational phenomena described in this article were apparently found among many, although not all, Northeastern Algonkians, including native groups of New England as well as Canada. Speck, Steward, and others have considered this problem for many years. They were also found among certain Mackenzie Basin Athabaskans, as Jenness has shown. A very comparable case of acculturational process was studied by Steward among the British Columbia Carrier. These cases will be cited in the concluding comparative section. The Montagnais are taken as our principal example because Eleanor Leacock studied them in detail from this point of view.
The Mundurucú of Brazil are analyzed on the basis of a year of field research by Yolanda and Robert Murphy during 1952-53. The research was conducted under the sponsorship of the Department of Anthropology, Columbia University, and was made possible by a Research Training Fellowship granted by the Social Science Research Council and the William Bayard Cutting Traveling Fellowship, awarded through the Trustees of Columbia University.

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commercial influence led to reduction of the local level of integration from the band or village to the individual family and in the way in which the family became reintegrated as a marginal part of the much larger nation. The resultant culture type was similar in each case in that the local culture core contained the all-important outside factor of almost complete economic dependence upon trade goods which were exchanged for certain local produce and because the functional nature of local production, the family, and other features were directly related to this new element. The common factor postulated to have causal importance is a kind of economic activity--the collection of wild produce--which entailed highly similar ecological adaptations. While rubber production differs so greatly in particulars from fur trapping as the tropical forests differ from the sub-arctic barren-lands of Labrador, the result of the acculturative processes in the two cases was the independent emergence of the same type of culture, as defined in terms of level of integration and culture core. We shall use the latter term to denote the structural interrelationships of the basic institutions of the culture.

This case study should also help clarify the heuristic concept of cultural ecology, and especially to illustrate how fundamentally it differs from environmental determinism. It will be shown that total environment is in no way the decisive factor in the culture-environment relationship. In analyzing the creative processes in the adaptation of culture to environment, it is necessary to determine the crucial features in the environment that are selectively important to a culture of a particular level and a particular area tradition. In this sense, it does not matter how different the subarctic and the tropical forests are in their totality. The primary fact is that each environment afforded a resource for trade purposes which could best be exploited by individual families controlling these products within delimited territories. These products did not achieve importance until the native populations became parts of larger sociocultural systems and began to produce for outside markets in a mercantilist pattern.

The process of gradual shift from a subsistence economy to dependence upon trade is evidently irreversible, provided access to trade goods is maintained. It can be said, therefore, that the aboriginal culture is destined to be replaced by a new type which reaches its culmination when the responsible processes have run their course. The culmination point may be said to have been reached when the amount of activity devoted to production for trade grows to such an extent that it interferes with the aboriginal subsistence cycle and associated social organization and makes their continuance impossible.

II. Northeastern Algonkians

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Our discussion of the acculturation of the Northeastern Algonkians assumes that the family-owned fur-trapping territories widely reported among these Indians were post-white in origin. The supposition of Speck [1915; 1939; 1942], Cooper [1939], and Kinietz [1939; 1942; 1947] that such territories were aboriginal lacks support in early historical documents. Moreover, indisputable cases of post-white formation of family territories have been reported by Leacock among the Eastern Montagnais [1954], Jenness among certain of the Mackenzie Basin Athabaskans [1932, p. 257], and Steward among the British Columbia Carrier [1941]. Leacock's study [1954] deals with the processes of development of trapping territories in greatest detail and consequently provides the most illuminating material. We shall constantly refer to it in the following delineation of the aboriginal culture core and the subsequent changes in it.

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According to Leacock, the Eastern Montagnais formerly possessed very loosely integrated bands. The basic aboriginal social unit was the "multi-family" winter hunting group consisting of two to five families. These groups were nominally

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patrilocal, but there was considerable deviation from this pattern, and individual families readily shifted from one group to another [Ibid., p. 34]. The continual splits and reamalgamations of these winter groups depended upon the vicissitudes of the subarctic Labrador winter. Game, never abundant or highly concentrated, became thinly scattered during severe winters. Families then had to break away from the winter multi-family group in order to exploit the country extensively. In better times, they might reassemble with a different group of families. While each of these groups had a leader, his following was ill-defined and fluctuating in membership. 621

Despite the frequent necessity for the winter group to split into smaller units, the Eastern Montagnais preferred to live in larger social groups, for collective hunting was generally more efficient for taking large game. Leacock's more conservative informants, in fact, regarded solitary or semi-solitary hunting as a white man's technique, and they expressly said that it was not appropriate for Indians. Moreover, in the absence of outside sources of food, which are available today, sharing of game was essential to survival since any family might be unlucky in hunting. The rigors of the environment necessitated a degree of social fluidity and amorphousness that was essential to physical survival. Owing to variations in environmental factors, especially in the quantity and distribution of game, crystallization of more rigid and permanent winter groups was impossible. 621 224

The Montagnais were, however, grouped into somewhat larger units during the summer season of fishing and caribou-hunting. Each summer, several multi-family winter groups gathered together on the shores of the lakes and rivers, where they could obtain fish in some quantity. These groups, according to Leacock, did not maintain ownership of well-defined territories in native times [Ibid., pp. 14-15]. Each band had only a rough and generally-recognized territorial locus of operations. But it would have been contrary to the interests of any one band to encroach upon the lands of other bands; for band areas represented an approximate division of resources in relation to population. But since local availability of game differed each year, it was customary that a temporarily favored band offer hospitality to one that was starving. 221 621 423 [576]

These "bands" had little or no formal organization. There were no band chiefs or definite mechanisms for integrating the band as a social entity. The bands existed principally upon the basis of economic reality. They had greatest functional significance during the season of hunting large, migratory animals. While both the Montagnais and the culturally indistinguishable Naskapi hunted caribou, the relatively greater reliance of the latter upon caribou probably accounts for the stronger development of band hunting territories in northern Labrador. 621

Leacock divides the development of the family trapping territory into three general phases [Ibid., p. 24]. In the first stage, when the Indians were only slightly involved in the fur economy, the trapping of fur-bearing animals and trade for hardware and food-stuffs was secondary to native subsistence activities. In this stage the Indians were only partially dependent upon the trader and could still subsist on the native economy. Since the small, nongregarious and nonmigratory fur-bearing animals were not killed in great numbers by the more primitive techniques of wooden traps and firearms and since they yielded inadequate meat, the primary winter dependence was upon deer and other larger game. The Indians could devote themselves to the luxury of securing trade articles only after assuring themselves of an ample food supply. 177 224 439

These marginal trappers, however, rapidly became so involved in the barter system that certain western goods, such as pots, pans, knives, axes, steel traps, and firearms became necessities to them. Since these available manufactured articles were much more efficient than the corresponding native implements, the latter were rapidly displaced and knowledge of their manufacture was eventually lost. The basic process therefore was one of increasing dependency upon trade,

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which eventually brought the loss of many useful arts. During this early stage of dependency, the customary use of ill-defined territories by amorphous bands was still the only approximation of land ownership to be found, and bonds of intra-group dependency were still tight.

In the second period of Montagnais acculturation, the same fundamental process continued to the point where certain basic readjustments became necessary. Dependency upon the trader increased to such an extent that fur trapping became more important than hunting for subsistence. The Indian was now forced to buy the major part of his winter's provisions from the trader, and game formed only a supplemental food source. Owing to the difficulties of transporting a supply of food adequate for the entire family, the men began to leave their families at the trading post during the winter while they trapped in the company of other men. Debt obligations and credit facilities had already linked Indians with particular trading posts. The practice of leaving families at the posts throughout the winter tightened these bonds. The families depended upon the store for subsistence, and the post became the center of the trapper's social world as well as economic world.

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Leacock states that during this second stage, which is typified by the present day Natashquan band of Eastern Montagnais, there is still considerable territorial shifting of fur trappers and that family trap-line tenure is temporary and unfixed [Ibid., pp. 30-32]. Older informants expressed a preference for collective activity, which is exemplified today by trapping in groups, lack of definite proprietary rights in trapping territories, and the sharing among the men of the trapping groups of the fur from animals shot with guns. That animals trapped were claimed by the trap owner is probably also native.

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The stages outlined by Leacock, however, are not presented by her as clearly distinguishable periods during which cultural stability was achieved. They are no more than transitory phases, and the Eastern Montagnais are now, in our terminology, moving toward the culmination of the processes of change. Certain men, says Leacock, show an increasing tendency to return to the same trapping territory year after year [Ibid., p. 30]. Within these more limited precincts, usually no more than two trappers can work together. To a certain extent, the example for this pattern has been set by the white trappers, but the Indians follow it primarily because it is the most efficient working arrangement. When a single Indian enjoys the yield and has a vested interest in the vital resource of his territory, he attempts to protect and perpetuate it by practices of fur conservation which were not native to the culture. The more conservative Montagnais trappers do not wholly approve of the new mode of work followed by their compatriots, but they respect their tenure of exclusive trapping rights to a limited region. What emerges is a system of ownership by usufruct, a system also found among the Western Montagnais and, in fact, in many other areas of the world in which controls of law and government are loose and population density is low.

As more and more Eastern Montagnais adopt this new exploitative pattern, the group as a whole increasingly acknowledges family rights to delimited fur territories. Such rights will extend over much if not most of this area, and it will undoubtedly encroach seriously upon the semi-nomadism of the more conservative Indians. Ultimately, these latter, too, will have to change. What finally emerges will be the classical family trapping territory system in which definitely limited tracts are held by the head of a family and inherited patrilineally.

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In order not to confuse or oversimplify theories of the origin and development of property rights, it is important to recognize that rights to fur trapping territories mean merely customary or usufruct rights to the furs of animals within a defined area. They by no means give exclusive rights to control of and profit from the land itself and everything thereon or even to all its wild life. Anyone

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may pursue and kill deer or caribou on any fur area. In some instances, another may kill and take the meat of a beaver, provided only that he give the pelt to the man having exclusive rights to the furs within the territory in question.

Two basically different concepts of rights to resources within the same area co-exist, each justifiable and explainable in its own way: the right to hunt large game for subsistence purposes practically anywhere and the right to monopolize fur-bearing animals within prescribed areas. In British Columbia the provincial government recognized these differences some years ago and registered family owned trapping territories of the Carrier Indians and protected them by law while permitting moose-hunting anywhere.

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This end product of acculturation is substantially Leacock's third stage. The nuclear family now becomes the primary economic and social unit, and the old bonds of inter-familial economic dependency become attenuated. The new individualism has even penetrated the nuclear family. Among the Western Montagnais, the son of a trapper owns the beaver lodges which he discovers, whereas among the most acculturated of the Eastern group, only the family head may own such a resource.

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With the breakdown in interfamilial ties among the Northeastern Algonkians, the economic centers of gravity for the families are the trading posts. Leacock says:

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> "The movement of trading posts has obviously been the most important factor determining recent shifts in the size and location of Montagnais bands. However, it would be wrong to infer from this that increasing dependence on trade has acted to destroy formerly stable social groups. The reverse seems to be closer to the truth--that the changes brought about by the fur trade have led to more stable bands with greater formal organization". [Ibid., p. 20]

Leacock gives the Seven Islands band as an example of this post-contact development. This new "band", however, is of a different order entirely than aboriginal hunting bands, for the principal bond between the members is that they all trade at the Seven Islands trading post. They claim no band territory; in fact, all present trends are towards familial tracts and not band lands. The modern band has a chief whose principal function is to act as intermediary with the Indian Agent. Also, the Indians refer to themselves as the "Seven Islands" (derived from the name of the trading post) people, and are so called by other Indians. In the interest of taxonomic clarity it is best not to describe such an arrangement as a "band". Such a group is reminiscent of the post-white Shoshoneans of the Great Basin, who classify themselves principally by reservation, for example, Warm Springs Paiute, Burns Paiute, Owyhee Shoshoni, and so forth. Prior to the Reorganization Act, the only basis for these groupings was common residence on a reservation and representation by a spokesman, who generally attained his position partly through prestige, but probably more importantly through recognition by the Indian Agent. Since the agents preferred "cooperative" men, the chiefs often did not truly represent the Indians. These reservation people, like Leacock's Seven Islands band, had little formal structure and a very limited raison d'etre. The stability of these groups is almost entirely a function of their linkage to the whites, an outside factor. Among the more acculturated Eastern Montagnais, the basic socio-economic unit appears to be the nuclear family.

III. The Mundurucú

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We shall discuss the Mundurucú in somewhat greater detail than the Algonkians not only because they are less known ethnographically but because the special

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problem of acculturation toward individual families has not been adequately described for South America.

The Mundurucú have been in active contact with European civilization for the last 160 years, of which only 80 years have been spent in rubber exploitation. The following description of the pre-rubber period Mundurucu does not purport to depict the pre-contact, or aboriginal, Mundurucú, but refers to the middle of the nineteenth century. Earlier changes in Mundurucu culture form the subject of another paper [Murphy 1965].

The Mundurucú have inhabited the gallery forests and savannah lands east of the upper Tapajós River in the state of Pará, Brazil, for at least two centuries. The savannah in this region is quite limited, and the predominant flora are the high forest and thick vegetation typical of the Amazon basin. The Mundurucú chose the open country for their villages because remoteness from the larger streams afforded some protection from river-born enemy attack and relief from the swarms of insects which infest the river banks, while the absence of forests immediately adjoining the villages gave some security against the dawn surprise attacks favored by nearly all tribes of the region. These attacks were difficult to launch without cover. Since the Mundurucu used water transportation only slightly, isolation from the rivers was not a hardship.

It has been noted that the nineteenth century Mundurucú and Northeastern Algonkians were on the same level of sociocultural integration. The simple, loosely-structured nomadic hunting bands of the Algonkians were roughly equivalent to the semi-sedentary villages of the Mundurucú. In both instances, the local group consisted of a multi-family, autonomous community. Under certain circumstances, the various Mundurucú villages tended to integrate on a tribal level, but there were no permanent trans-village political controls. That no Mundurucú village could function in isolation, since there was inter-village marriage and periodic cooperation in warfare and ceremonialism, does not necessarily imply a higher level of integration in economic or political activities. Similarly, it can be argued that Northeastern Algonkian bands were autonomous but by no means isolated from other such units.

The Mundurucú and Algonkians were integrated on the same level, but their cultures differed structurally or typologically and in content. Patrilineal clans and moieties in Mundurucú society made kinship ties more extensive and pervasive. Village subsistence was based on slash-and-burn horticulture. Although the heavy work of clearing the forest was done by work groups consisting of all the village males, garden care and manioc processing were carried out by the women of the matrilocal extended family. The chief occupations of the men were hunting and warfare.

Leacock's reconstruction of the aboriginal society of the Eastern Montagnais shows the nuclear family to have had greater functional importance than among the Mundurucú. The Montagnais family was a relatively stable unit within the shifting and amorphous hunting bands, whereas the Mundurucu pattern was the converse. Each Mundurucu household was a stable unit composed of women and their female offspring. The Mundurucú had the seeming paradox of matrilocal extended families in a society of patrilineal clans and moieties. The men married into these extended families from similar units in the same village or from other villages. However, there was no need to integrate a husband into the extended matrilocal family of the household, because the focus of his activities was the men's house. All males upon reaching adolescence slept in the men's house, which was located on the western perimeter of the circle of houses composing the village. The females of each household prepared and sent food to the men's house to be eaten in a communal meal. The men's house was also the center of male work and relaxation. The most immediate economic tie of a man to his wife's house was that he brought his daily take of game there. Communal distribution of game, however, made this economically

unimportant. Otherwise, the husband visited his household for purposes of sex, to play with the children, or to take a between-meals snack. 593

Marital break-ups caused no great social maladjustment. The woman and her children simply lived on in the household and took another husband. If the ex-husband was originally from the same village, he did not even have to move his hammock from the men's house. The husband and wife performed no economic tasks together, and the sexual division of labor operated mainly within the context of the village as a whole rather than the nuclear family. [586] [462]

The yearly cycle of activity of the pre-rubber period Mundurucú was not patterned by warm and cold seasons as in Labrador, but by rainy and dry periods. At the end of each rainy season, April on the upper Tapajós River, the trees and vegetation in each projected garden were felled by a work party composed of all the men of the village and allowed to dry out. After clearing the forest, many families went in small groups to the larger streams where fishing was good during low waters and where they could hunt the many game animals which left the interior forests to feed and drink at the streams. 221 241 [224 226]

After two to three months it was necessary to return to the village to burn the felled vegetation in the garden clearings before the first rains wet the forests. After the early rains had sufficiently moistened the ground, individual gardens were planted to manioc by the cooperative efforts of all the men and women of the village. Other vegetables were planted by the women of the household of the man who initiated the gardens, and who was formally considered to own it.

Maize, squash, beans, and other vegetables were harvested by January or February and eaten immediately. The root crops, including bitter and sweet manioc, matured at the end of the rainy season in new gardens. A longer period of maturation was required for root crops in replanted gardens. Bitter and sweet manioc can be harvested as needed; this natural storage made these crops invaluable for year-around subsistence.

The bitter manioc, by far the most important garden product, required considerable labor to render it edible. The tubers were grated, the prussic acid was extracted by use of the tipití, or basketry press, and the pulp was then toasted either in the form of the native beiju, a flat manioc cake, or of farinha, the coarse Brazilian manioc flour. Farinha was sold to Brazilian traders. All phases of manioc processing were carried out by the women of the extended family household, who worked together under the direction of the oldest woman of the house. The labor was divided according to specialized tasks which, however, probably contributed as much towards making the operation pleasant as efficient. 252 [439]

Farinha was thus a collective product in that it involved the communal labor of the village in garden clearing and manioc planting, and the efforts of the women of the household in processing. Moreover, it was sold to the traders by the village as a whole and not by individuals. In this barter the hereditary village chief represented the village, and the proceeds from the sale were divided equally among the contributing households. 476 439 [622]

Bates, the British naturalist, describes the mode in which this trade was conducted in the mid-nineteenth century, when the first small quantities of rubber were traded by the Mundurucú along with larger amounts of other produce: 439

> "They [the Mundurucú of the upper Tapajós River] make large plantations of mandioca, and sell the surplus produce, which amounts on the Tapajos to from 3000 to 5000 baskets (60 lbs. each) annually, to traders who ascend the river from Santarem between the months of August and January. They

439 also gather large quantities of salsaparilla, india-rubber and Tonka beans, in the forests. The traders on their arrival at the Campinas (the scantily-wooded region inhabited by the main body of Mundurucus beyond the cataracts) have first to distribute their wares--cheap cotton cloths, iron hatchets, cutlery, small wares, and cashaça--amongst the minor chiefs, and then wait three or four months for repayment in produce". [1869, pp. 243-244]

439 622 624 [314] When rubber became the major product of Amazonia the same pattern of trade was perpetuated among the Mundurucu. All of the rubber collected was turned over to the chief, who alone negotiated directly with the trader. The merchandise given for the rubber was, insofar as could be ascertained through contemporary informants, equitably distributed to each man in proportion to the rubber he had produced. But since chiefs were commonly more prosperous than other men, it can be assumed that they did not suffer in their role of middleman. The share taken by the chief, however, was never so great as to result in truly significant wealth differences. In fact, the traders usually managed to keep the Indians in debt, and this debt was charged against the chief as the representative of the village. Tocantins, who visited the Mundurucú in 1875, published a bill presented to one chief [Tocantins, p. 154]. If this bill is typical, the Indians' indebtedness was frequently very heavy. These debts were used to force the chief to extract greater production from his followers.

As the Mundurucu depended increasingly upon trade, the chief became more subordinate economically to the trader, who manipulated him accordingly. The trader eventually was able to appoint "chiefs" to carry on the trade. An appointed chief was usually known as the capitao, or "captain", as distinguished from the hereditary village chief, who was called anyococucat or ichongop. By using the "captains" as local trade representatives, the traders were able to increase their control over the villages. At the same time, by robbing the hereditary chiefs of their trade function, they weakened the entire structure of leadership. In time, the capitao displaced the hereditary chief almost entirely. To increase the prestige of the trader-appointed chief, the trader often took his protegé on his annual trip to buy supplies in Belém, where the chief's position was confirmed by the governor or some other official.

[579] The Mundurucú dependency upon trade at first evidently increased the peacetime authority of the hereditary chief, for the villagers relied upon him to promote and secure their best interests in trading activities. The appointment of capitoes undermined the native chief, and initially increased the trader's control over the village. The people became confused, however, as to whether the capitao or the anyococucat should be regarded as "chief". Ill feeling towards and suspicion of the appointed chiefs began to develop, for the Indians were always aware of, although powerless to cope with, the sharp practices of the traders, and they usually assigned the capitao a share of the blame. Upon the latter fell the onerous task of goading the people to harder work in the rubber avenues. Since most Mundurucu do not even today consider rubber collecting a congenial occupation, the role of the capitao must have done little to increase his popularity. During the field research among the Mundurucú, the young, bilingual trader-appointed "chief" of the village of Cabitutú was in danger of losing his life. Distrust of the trader, whom the "chief" represented, was centered upon this young man and threatened his position so greatly that he was on the verge of flight.

In later years, as will be described subsequently, individual Mundurucú Indians have tended increasingly to deal with the trader directly rather than through the "chief". For this reason, village political organization has been effectively shattered.

439 624 178 The white-appointed Mundurucú "chief", unlike his Northeastern Algonkian counterpart, mediated trade relations between a group of followers and the

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whites. After individual trading had become strongly established among one section of the Mundurucu, however, "chiefs" were chosen by the Indian Agent and by missionaries in order to control the general behavior of the Indians, and not specifically for commercial purposes. This more nearly approximates the modern Montagnais situation, although it was reached through a different sequence of functional roles and from a different aboriginal base. In both cases, the Indians themselves were very conscious that these men were not genuine chiefs in terms of aboriginal leadership patterns, and both groups apparently suspected that the white-recognized chief was promoting the interests of the white men rather than those of his own people. The new leadership patterns never became fully established. While these patterns were functional in terms of white-Indian relations, they were dysfunctional in terms of the native socio-cultural structure.

Among the Mundurucú, therefore, the integrity of the local socio-political groups was, in part, temporarily maintained by a change in the functional role of the chieftain. That the changed pattern of leadership eventually became dysfunctional resulted in part from the ecological adaptations necessary to rubber collection. These adaptations, however, did far more than contribute to the disintegration of political controls. They undercut the very economic basis of village life.

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Hevea brasiliensis, the native and most common specie of rubber tree, grows wild throughout the upper waters of the Amazon. It can be exploited only during the dry season, and, in the upper Tapajós River valley, the maximum length of the gathering season is from May to early December, approximately seven months. Since these trees are scattered throughout the low lands near the watercourses, they are reached by circuitous paths cut through the undergrowth. The spacing of the trees and the work involved in rubber collection generally limit the number of trees tapped daily by one man to one hundred and fifty or less. Some collectors improve their yield per tree by maintaining two or three separate avenues which they visit only every second or third day. The distribution of rubber trees is such that each avenue gives access to trees within an area of about three to five square miles. The actual size of this territory depends, of course, upon the density of the rubber trees. In some sections of the Amazon drainage wild rubber is more abundant than are others. One may travel ten to twenty miles on reaches of river where rubber is sparse without passing a single habitation, but, where rubber is more plentiful, one encounters houses at intervals of a mile or even a half-mile.

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The rubber tapper must work in his avenue or avenues almost daily, and therefore must live near them. Since each tapper exploits a considerable tract of land, his physical remoteness from neighboring tappers is a matter of necessity. Thus, on the Tapajós River, which has a population of about 3,000 excluding the Mundurucu, there are only two Brazilian villages of any consequence. One of these has a population of about 700, and the other has only 150 people. The other settlements are merely hamlets consisting of a trading post and from two to seven houses. The majority of the population live in isolated houses on the river banks.

The exploitation of wild rubber is a solitary, individual occupation in that the tapping of the tree, the subsequent collection of the latex, and the final coagulation process are one-man jobs. The last phase, carried out at the end of the day, consists of solidifying the latex over a smoky fire. The simplicity and the daily time-schedule of the entire rubber process in Amazonia is such that no one can profitably leave off collection to specialize only in tapping or collection or coagulation. For similar reasons, two men do not work in the same avenue. However companionable, it would not be a practicable means of increasing production.

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This brief account of how wild rubber is exploited is necessary to an understanding of changes in Mundurucu society. In the earlier contact period, the

439 Mundurucú traded chiefly in manioc flour and wild product, and rubber was of secondary importance. Chandless' observation [1862, p. 27] that in 1860 the Mundurucu of the upper Tapajos "trade in salsa and sell provisions to the parties of India-rubber makers" indicates that important trade in articles other than rubber continued at least until 1860. Shortly after this date, however, the tempo of rubber extraction in the Amazon quickened, and in 1875, as Tocantins' account shows [1877, pp. 151-154], rubber was the most important Mundurucú product.

177 439 With the advent of the rubber trade, Mundurucú acculturation entered its second stage. During the first, when trade in manioc flour and certain wild products predominated, the hereditary chief mediated between the traders and his people, aboriginal social patterns were largely unchanged and warfare was still vigorously prosecuted, frequently under the sponsorship of traders and colonial authorities. During the second stage, which lasted until 1914, warfare abated, the size of villages decreased owing to migration and European-introduced diseases, and the position of the hereditary chief was weakened by the imposition of appointed "chiefs". The period was characterized by a "loosening" of integration rather than by a change in mode of integration, or structure.

221 314 Work in the rubber avenues in the latter half of the nineteenth century did not upset the annual subsistence cycle as much as might be expected. Whereas many people had formerly left their villages during the dry season to hunt and fish along the streams, they now left to collect rubber. As in times past, they cleared their garden sites before leaving and returned to the village in time to burn them over and plant. The necessity to provide all their own subsistence limited the rubber producing season to three months, mid-June to mid-September, [171] out of a possible seven. This parallels closely the earlier phases of Northeastern Algonkian fur production, when the Indian's need to obtain their own meat supply by aboriginal cooperative techniques limited fur production and conflicted with their increasing desire for Western manufactures [Leacock 1954, pp. 25-26].

439 177 During the nineteenth century (and to the present day) the Mundurucú, like the Algonkians and in fact most aborigines, had been acquiring a seemingly insatiable appetite for the utilitarian wares and trinkets of civilization. Firearms increased their efficiency in warfare and hunting, especially the individual hunting carried on during the rubber season when one or two families lived in [224] isolation adjacent to their rubber trees. In communal hunts, the game could be surrounded and the range and velocity of the weapons were not so crucial to success. Other items, too, became necessities to the Mundurucú. Contrary to popular belief that nudity is beneficial to tropical peoples, there are various reasons why clothing is desirable in the Amazon. Insect stings greatly annoy [291] the Indians, and at night the temperature drops to from 55° to 65° F. Clothing, however, is expensive, and only in recent years has it been used consistently in some Mundurucú villages. The movement toward covering the body entailed the development within two generations of a sense of shame comparable to that of Europeans. The Mundurucú, especially the women, have also acquired a desire for finery for the sake of display. They have also developed a taste for many strictly non-utilitarian goods, such as the Brazilian raw cane rum and the beads and ornaments purveyed by the trader.

A full and adequate description of the growth of Mundurucú dependence upon trade would require a separate treatise, for reliance upon manufactured goods entailed further dependence upon many adjuncts of these goods. For example, fire- [415 323] arms required powder and lead, while garments of factory-woven cloth had to be made and repaired with scissors, thread, and needles. The substitution of metal pots for native ones of clay and of manufactured hammocks for the native product has reached the point where many young women now do not know how to make these articles. The Mundurucú barely remember that their forebears used stone axes and bamboo knives, and they would be helpless without the copper toasting pan used to make manioc flour.

8: Murphy & Steward E-5 (1952-1953) 1956
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Despite the flourishing trade in geegaws, the allure of most trade goods lay more in their sheer utility than in their exotic qualities. The increased efficiency of the Mundurucú economy made possible by steel tools must have been enormous. 439 177

The parallels in these basic processes of acculturation between the Mundurucú and the Montagnais are probably to be found also among most aborigines. In the case of the Mundurucú, the displacement of aboriginal crafts by commercial goods better suited to meet local needs, both old and new, inexorably led to increased dependency of the people upon those who furnished these goods and therefore to a greater involvement in economic patterns external to their own culture.

The Mundurucú families, like those of the Algonkians, became dependents of the trading posts. More than a century ago, Bates related that Brazilian traders made seasonal expeditions to trade with the Mundurucú. After rubber became important in the Amazon, permanent trading posts were established on the upper Tapajós River. These posts, whether owned by individuals or companies, exercised such control over tracts of rubber-producing forest that they compelled the rubber collector to trade exclusively with them. They accomplished this by their power of dispossession and by holding the collector in debt. The traders among the Mundurucú were never able to obtain title of ownership to the rubber regions within Mundurucú country proper,[2] but they made the Indians dependent upon them in a very real sense through their credit arrangements. In time, all of the Mundurucú villages came under the control of various traders, who were so influential by virtue of being necessary to the Indians that they were able to appoint the "chief", in violation of Indian tradition, and thereby intensified their control over the Indians.

The progressive weakening of the hereditary chief, whose authority was based upon aboriginal activities, was furthered by the decline in warfare. The post-white warfare, although frequently mercenary in character and auxiliary to Portuguese occupation and expansion, continued the native pattern of authority. The Indians were paid in trade goods. When, at the end of the nineteenth century, the central Amazon region had been pacified, the military help of the Mundurucú was no longer needed. Meanwhile, rubber collecting had become the principal means by which the Indians acquired foreign trade articles. Since the Indians were important to rubber production in labor-starved Amazonia, they were pushed to greater efforts by the traders. Increased devotion of the Mundurucu to rubber production correspondingly interfered with their warfare; for in earlier times the rubber season was the time for war. When in 1914 a Franciscan mission was established in their midst, the earlier political and economic basis of Mundurucú warfare was so undermined that the admonitions of the priests that they live in peace were quite effective. [622] 721 177 439 [797]

At the end of the second stage of Mundurucú acculturation, only bonds of kinship and economic collectivity in producing food for the group held Mundurucú society together. Much of the old structure was gone. The chieftaincy had been undermined, warfare had ended, and reliance upon the outside economy was taking effect. During the nineteenth century, increasing numbers of Mundurucú who had difficulties with their co-residents were able to leave their villages permanently. Many others left in order to participate more fully in the rubber economy. 177 621

Full dependency upon rubber collection is not compatible with village life. Since the aboriginal Mundurucú villages were located several days foot travel from the rubber areas fringing the rivers, a family participating both in collective village life and the rubber economy had to migrate seasonally between its village and its house in the rubber area. Families living in this manner could spend only three to four months in rubber production. The only way the Indians can devote their full efforts to rubber tapping is to leave the villages of the interior savannah and live permanently near the rubber trees along the river banks. A large [221] 314 361 177

36 34 portion of the Mundurucú, whose increased need of and desire for trade goods could no longer be satisfied by the yield of only three months' work in the rubber avenues, have made this choice.

[183] These families represent the third stage of Mundurucú acculturation. Their resettlement in the rubber regions, however, has occurred in two ways. The first is a direct and complete adaptation to rubber collection, which can be studied in many contemporary inland villages. People desiring to increase their income from barter improve their rubber avenue; house to make it more comfortable [571] during the rains, plant gardens, and remain there. Although they maintain relationships with the inland villages, the loci of their social lives lie increasingly within the orbit of the communities of scattered families dependent upon the trading posts. The final step in their incorporation into the local Brazilian economy and the culmination of this acculturative process will come when they abandon horticulture to devote full time to work in the rubber avenues, and, like their Brazilian neighbors and the Western Montagnais, depend upon trade for the bulk of their food supply.

The second mode of readaptation to the rubber economy, while ending in the same type of settlement pattern and social organization as the first, involves 177 passage through an intermediate stage. The previously mentioned mission on the 747 Cururu River had indifferent success in attracting the Mundurucu until the 1920s, when a policy of trading with the Indians was adopted. The missionaries were honest and generous in their commercial relations, and rubber-tapping became more profitable to the Indians. Their intensified collecting activities resulted in a general movement to the banks of the Cururu River, and by the 1930s many interior villages had been abandoned.

177 The migrants settled so heavily on the river banks that they were able to 621 nucleate in new villages. These villages, however, lacked the men's organiza- 544 tion, division of labor, and collective patterns which structured the old type villages. Although the population shift from the old to new villages was heavy, it involved individual families rather than whole villages. The new villages grew as additional nuclear families arrived from the savannah communities. During this period of growth, since the new villages consisted of families, many of which had not previously been connected with one another, each family had to carry on the subsistence activities which were formerly the function of the extended family and village. Gardens were cleared and planted by husband and wife with whatever aid their children were capable of giving. Fish, taken by family members from the nearby rivers, rapidly replaced game formerly taken in collective hunts as the major source of protein. Meanwhile, increased rubber production enabled the Indians to buy the hooks, lines, and canoes with which fishing was made more effective. As the new villages grew larger, the atomistic division of labor was perpetuated, and the nuclear family became the basic unit of production.

621 Political authority on the Cururú River was almost nonexistent. The migrants 178 began to trade as individuals, first with the missionaries and later with the newly established Indian Post. This economic trend stripped the "chiefs" of one of their last remaining functions, and their role was reduced to that of intermediary between the villagers and the priests and Indian agent.

The amorphously structured villages which arose on the banks of the Cururú River represent a transition to the family level and are not the culmination of adaptation to the ecology of rubber collection. Most of the residents of the [221] Cururú River still have to reside away from their villages during the rubber season, but the easy communication made possible by canoe transportation allows the majority to return to rubber production after planting their gardens.

The new individualism and fragmented division of labor, combined with facets of the old culture which had become dysfunctional in the new situation, contributed

8: Murphy & Steward E-5 (1952-1953) 1956
SQ13 Mundurucu SQ13
Montagnais NM6

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to the disorganization of Curuá River society. The political authority of appointed "chiefs" was now a means of extending the influence of the whites. The continuing migration of young men from the remaining primitive villages of the savannahs caused an oversupply of men on the Curuá River, and conflicts over women became rife. Owing to the endless squabbles in villages which had lost their aboriginal basis of integration, dissidents moved off to live at their rubber avenues or formed new and smaller villages. This fission process is still going on. Concomitantly, the Mission and the Indian Post are becoming more important as focal points in a new mode of integration of the Mundurucu. Over one-third of the Curuá River population make their rainy season homes at these agencies, which serve as centers of trade and of social and religious gatherings. It is from the Post and Mission, also, that the lines of authority now radiate.

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IV. Comparative Summary

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The accompanying table and chart present the major phases of acculturation in summary form, as abstracted from the historical continua. The basic acculturative factors in both cases exerted parallel influences, although the two societies were substantively different until the final culmination was reached. There were four causal factors common to each. First, both became involved in a mercantile, barter economy in which the collector of wild products was tied by bonds of debt and credit to particular merchants. Such involvement also occurred widely among native peoples who produced crops or livestock. This arrangement must be distinguished from cash transactions, in which, owing to the impersonality of money as a medium of exchange, the primary producer has greater freedom of choice as to with whom he will deal. In a pure credit-barter economy, all transactions are based on a personal relationship between the principals; the merchant must be able to rely upon the continued patronage of the primary producer whereby the latter liquidates past debts while assuming new ones. It seems to be a basic procedure that the pre-literate Indian is kept in debt by the trader. While the latter can manipulate accounts at will, and no doubt is frequently guilty of malfeasance, he usually allows the Indian to buy beyond his means. The debtor-producer, in selling his future production, and the creditor will not extend payment unless assured of delivery. Where such an economy is found, it is common for merchants to refuse to deal with primary producers who are in debt to another merchant. This is a "gentleman's agreement" in the Amazon, although it is frequently violated by wandering traders. Second, the growing ties of dependency upon the traders are at the expense of collective bonds within the respective societies. Reliance upon individuals and institutions outside the native social system are intensified by a steady increase in demand and need for manufactured goods. This, as we have seen, goes beyond the mere initial allure of Western tools and ornaments. Luxuries soon became necessities--a process that can be found in our own culture. Third, while crude latex and animal furs are very unlike articles, they imply a common cultural-ecological adaptation. Both are natural products having a reliable occurrence in worthwhile quantity within an area which can be most efficiently exploited by one man. Both require conservation, for careless exploitation can seriously reduce the number of furbearing animals, or render rubber trees worthless. The producer has an incentive to maintain the productivity of his resources. Finally, both rubber trees and fur animals are sufficiently dispersed to require that persons exploiting them live or work at some distance from one another.

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These factors of change were essentially the same among both Mundurucú and Montagnais, and they were introduced through contact with the outside world. Their initial effects upon the aboriginal cultures were somewhat dissimilar, owing to aboriginal differences between the two groups. Whereas the Mundurucú chief served at first as intermediary with the trader, this seems not to have been true of the Montagnais chief. Montagnais family heads, however, traded on behalf of their sons. For a short time, this pattern was followed by many

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[Text continues on p. 349]

8: Murphy & Steward E-5 (1952-1953) 1956
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Tabular Comparison

Mundurucú	Montagnais
1. Pre-rubber	1. Pre-fur
Village consists of men's house, matrilocal extended family households; population divided into patrilineal clans and moieties. Village males form collective hunting and garden-clearing group. Household females form the horticultural unit. Intensive warfare for headhunting and as mercenaries allied to whites; partial dispersal of villagers in dry season for fishing and war. Chief the war leader and representative of village in trade of manioc flour.	Nomadic composite band hunts large migratory game animals. Frequent band breakup during winter scarcity. Amalgamation of several winter groups for summer hunting and fishfishing. Chieftainship weak and shifting--leader of winter group; no summer band chief. Residence bilocal, frequent shifts of winter group membership.
2. Marginal involvement	2. Marginal involvement
Chief continues as mediator with trader, but is now often trader-appointed--trader gains influence. Dry season population dispersal for rubber production rather than fishing and war--war continues, but lessened in importance. Basic pre-rubber economy and settlement pattern unchanged. Continuing displacement of aboriginal crafts.	Trade by family heads--leaders do not trade for followers. Trapping secondary to subsistence hunting--subsistence still gotten traditionally, basic social patterns persist. No trapping territory. Linkage to trading posts.
3. Transitional	3. Transitional
Further displacement of native crafts, increased need of trade goods, increased dependence on trader. Chieftainship undermined due to new type chiefs who now represent the trader. Agricultural cycle and village life inhibit larger rubber production. Trend toward individual trade.	Further displacement of native crafts, increased need of trade goods, increased dependence on trader. Increased fur production interferes with subsistence hunting. Individual trade conflicts with group solidarity.
4. Convergence and culmination	4. Convergence and culmination
A. Intermediate Move to new villages in rubber regions. Chief now intermediary with Indian agent and missionaries. Individual trade, individualized subsistence economy--end of men's house and traditional village--	Fur trapping now predominant; winter provisions purchased Winter groups not necessary with end of collective hunt--family or individual hunting gives greater efficiency, allows conservation. Shift of economic interdependencies from group to trader.

8: Murphy & Steward E-5 (1952-1953) 1956

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Mundurucú (cont.)	Montagnais (cont.)
village held together only by weakening kin ties and sociability. Centripetal factors (e.g., sorcery, sexual rivalry) cause fission of these villages and results in B, below.	Emergence of a chief who serves as intermediary with Indian agents and missionaries. Nuclear family basic unit at all times of year. Trapper maintains and transmits right to a delimited hunting territory exploited only by his family.
B. Dispersal (follows upon 3 or 4A) Leadership no longer integrative. Individual trade undercuts kin obligations. Conflict with agricultural cycle resolved by moving to rubber avenues--family now in isolation except for trade bonds.	

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Mundurucú during the period immediately after the Mundurucú chief had ceased to act as intermediary with the trader. After the breakdown of extended kinship bonds in both groups, individuals traded completely on their own.

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The native kinship organization persisted longer among the Mundurucú than among the Montagnais, and this has been a factor in perpetuating village life today among the less acculturated Indians east of the Tapajós River. Aboriginal Mundurucú kinship structure was more extensive and socially integrative than that of the Montagnais. Moreover, the aboriginal production of subsistence crops survives even among Mundurucú families living in isolation in their rubber avenues. The Mundurucu still produce all their own subsistence, although there are some changes in emphasis, technique, and organization.

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The Brazilian rubber tapper--the white man who has gone into the forest or the Indian of mixed blood who is completely acculturated and enmeshed in the mercantile economy--usually buys all his food from the trader and devotes the season when he could be growing his own food to tapping rubber or to working off his debt to the trader by performing personal services. At present, we know of only one case of a Mundurucu who bought most of his food, but we can confidently predict that, as the population becomes more acculturated toward dependency in all ways upon the larger society, an ever-increasing number will buy food. When they are no longer able to feed themselves by their own efforts, they will have effectively become caboclos, or neo-Brazilian backwoodsmen.

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The acculturative factors operated in two somewhat different ways among both the Mundurucu and Montagnais. First, they created a succession of modifications in the native societies, which gradually converged toward typological identity in the final family level. Second, during this evolution of the total groups they produced deviant families which broke away from their fellow tribesmen to devote themselves entirely to tapping or trapping. It was not until the processes had nearly reached their culmination that the surviving but greatly modified native society began to disintegrate.

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Among the Mundurucú the bonds of leadership and kinship had undergone a steady and slow attrition during one hundred years. The end of warfare had robbed Mundurucú culture of a great deal of its vitality, and the chief was reduced to a mere figurehead, manipulated by the trader and the religious and governmental agencies. Work in the rubber avenues and dependence upon the trader had served to sever and weaken ties within the society. At the final point of transition to isolated residence, and total divorce from traditional communal life, the Mundurucu were not much more closely integrated than the Montagnais.

8: Murphy & Steward E-5 (1952-1953) 1956
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The culmination of the long acculturative processes shows a high degree of structural parallelism. Both Munduruc and Montagnais populations are divided into loosely integrated and dispersed communities centering about particular trading posts with which the individual families have ties. The Indians still recreate, associate, and intermarry with one another, but the nuclear family is now the stable socio-economic unit. It is the highest level of integration found among the native population itself, but it is linked to the nation through the intermediary of a regional economy. The integration of the family with the national level is highly specialized and limited. These families do not yet share a substantial part of the common denominator of the national culture or even of the regional sub-cultures of their non-Indian neighbors.

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There is a final phase, which, though occurring at different dates in the different localities, is characterized by assimilation of the Indians as a local sub-culture of the national sociocultural system and virtual loss of identity as Indians. At this point, the acculturational processes and results diverge, since the Indians participate to a much greater extent in the national culture. So long as the families maintain their marginal relation with the national society, they are quite unlike the basic populations of the nations in which they lived and much more like one another. When, however, they learn the national language, intermarry extensively with non-Indians, and acquire many of the non-Indian values and behavior patterns, they have to be classed with the special regional sub-cultures that have developed in portions of these nations.

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It can be predicted that the drastic shift in mode and level of integration will do much to hasten the loss of cultural distinctiveness. Fortes has cogently expressed the relationship between social structure and formal culture content in such a situation:

> "I would suggest that a culture is a unity insofar as it is tied to a bounded social structure. In this sense I would agree that the social structure is the foundation of the whole social life of any continuing society.....the social structure of a group does not exist without the customary norms and activities which work through it. We might safely conclude that where structure persists there must be some persistence of corresponding custom, and where custom survives there must be some structural basis for this" [Fortes 1953, pp. 22-23].

V. Further Comparisons

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We can delimit and refine the Munduruc-Algonkian parallel by the cross-cultural examination of structural changes caused by acculturation in other areas. We will not seek further parallels, however, but will discuss cultures in which divergence appears manifest. One instance of such apparent divergence is the Northwest Coast, where the fur trade at first strengthened or intensified rather than weakened the aboriginal social structure. The florescence of the potlatch and class system on the Northwest Coast as a result of new wealth in trade goods is a thesis which has been ably expounded by a number of students [cf. Barnett 1938; Drucker 1939; Collins 1950; Codere 1950]. It would be very misleading, however, to consider <u>any</u> trade in furs as the crucial factor. What really matters is <u>individual trapping of fur-bearing animals</u>. The sea otter was the principal fur bartered by most Northwest Coast tribes, and collection involved neither individual effort nor delimited territories. The amount of land trapping was probably fairly limited and in any event did not offset the cultural effects of the great salmon wealth which created surpluses rarely if ever paralleled by hunting, gathering, and fishing people.

The trapping activities of the Skagit of Puget Sound more nearly paralleled those of the Northeastern Algonkians, according to Collins description [1950, p. 335]:

8: Murphy & Steward E-5 (1952-1953), 1956
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"The [trading] posts played an important part in altering the economy of the Indians. First, they encouraged a shift in their hunting habits. The skins in which the traders were most interested were beaver and land otter. These animals had small value in the aboriginal economy, since they were less desirable for food than deer or elk, for example. At the traders' behest, however, hunters pursued these animals eagerly. Another economic shift took place when the hunters, instead of killing game for meat, began to exchange skins for food."

The result of this trade was, however, quite different from its effects in Eastern Canada.

> "The effects of these changes upon Skagit social organization were pronounced. Distinctions in social rank began to be more marked--a shift made possible since, though social mobility had always been within the grasp of any person of good descent who could acquire the distinction of wealth, new sources of wealth were now available" [Ibid., pp. 339-340].

The new wealth acquired by the Skagit was funnelled into the class structure and ultimately the potlatch. The difference, then, between the processes of change which occurred among Northwest Coast and Northeastern Canadian groups is that the former integrated the new wealth into a pre-existent class structure created and perpetuated by a fishing economy. Among the latter, since there were no cultural means or goals promoting the concentration of surplus wealth in the hands of a select few, the benefits rebounded to all persons. The same was true of Mundurucu society which also was unstratified. The differences between the Skagit on one hand as opposed to the Mundurucu and Montagnais on the other are attributable to the stratification of society among the former, which in turn is partially explainable by the greater aboriginal resources of the Skagit. In effect, this constitutes a difference of level of socio-cultural integration.

The impact of trapping upon a pre-existing social structure can be even better appraised among the Carrier of the interior of British Columbia, where the wealth in salmon was far less than on the coast. The fur trade among the Blackwater River Carrier involved intimate interaction with Northwest Coast groups, especially the Bella Coola. Goldman summarizes the effects of this contact upon the simple, bilateral Carrier hunting bands [1941, pp. 416-417]:

> "Undoubtedly the Bella Coola, like all Northwest Coast tribes, became relatively wealthy as a result of this trade. And in Bella Coola where wealth was the decisive factor in building rank, the fur trade must have been particularly welcome. And the lowly interior Carrier who hunted for furs in order to trade with the Bella Coola, who traded them to the whites, became an important part of the scheme of elevating one's rank. Although a Bella Coola did not gain valuable prerogatives from a Carrier son-in-law, if he could get a monopoly upon his furs he could make enough wealth to purchase new prerogatives. And as the Bella Coola benefited by this trade, so did the Alkatcho Carrier. The latter took up products obtained on the coast and traded them to the Carrier villages eastward on the Blackwater River drainage. As they obtained guns and steel traps, economic productivity spurted so that they were able to build up the necessary property surpluses for potlatching. Potlatching obligations in turn stimulated economic activity, and the degree to which they were able to potlatch made possible the full integration of crests as honorific prerogatives.

Given our previous hypotheses, developments more or less parallel to those in Eastern Canada might be expected. But these Carrier did not trade with European traders; they dealt instead with stratified Northwest Coast tribes in the context of an economic system, the rationale of which was the validation of rank by potlatch. As the following example of the Stuart Lake Carrier suggests,

8: Murphy & Steward E-5 (1952-1953) 1956
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direct trade with the whites and the end of potlatching result ultimately in the family trapping territory system.

The effect of the fur trade among the Carrier of Stuart Lake to the north of the Blackwater River run a similar course but culminated in family trapping territories, according to Steward's research. In pre-white times, the wealth of salmon fisheries, although far less than those of the coastal tribes, had provided some surplus, while contacts with the Tsimshian of the Skeena River had introduced a pattern for channeling this surplus to nobles who controlled the fishing rights of large territories in the name of patrilineal moieties. This wealth circulated through small-scale potlatches. The fur trade, carried on directly with the whites more than through coastal contacts, created a new source of wealth and intensified the native pattern. Although furs were trapped by individual society members, a noble had rights to certain percentage of the furs taken in his society's territory.

In the course of about 30 years, however, several processes combined to bring about individual trapping territories as among the Indians of eastern Canada. Most importantly, the new wealth in trade goods brought hardward that was of value to individuals. Pressures mounted to force the nobles to divide the trapping territories among their own children rather than to pass them on intact to their sister's sons, who had traditionally inherited their titles and rights. This process was aided by the activities of the Catholic missionary-ethnologist Father Morice, who effectively undermined the native religious sanctions of the class of nobles, and by the government, which banned potlatching. The older pattern survives only in isolated localities, where it is carried on clandestinely. At Fort St. James on Stuart Lake, where there is located a Hudsons' Bay Trading Post and some few hundred whites and Indians, the processes have reached a culmination almost identical to that of the Montagnais.

> "Present-day Carrier society at Stuart Lake consists of individual families that have exclusive rights to certain trap-lines that are registered with and protected by the Provincial Government. The family is the kinship and economic unit" [Steward 1941, pp. 500-501].

It seems likely that the Blackwater River Carrier have not yet reached the final stage of acculturation. The same may be true of the Nagit. The critical consideration is whether wealth in salmon among these tribes was so great that it offset the importance of trapping. This was not the case at Stuart Lake. On the lower Skeena River, salmon are so important that canneries have been built, and the Tsimshian and Tlingit have given up fur trapping to become commercial fishermen and cannery laborers.

Certain Plains Indians in North America also engaged in the fur trade but developed in distinctive ways. This is another illustration of the need to examine specific features in the taking of furs. There is a significant ecological difference between the collection of fur on the Great Plains and in the coniferous forests of Canada that lies essentially in the difference between hunting and trapping. It is incomplete and misleading therefore to make comparisons simply on the basis of "fur trading". In the Great Plains, buffalo hides were the chief item traded, whereas in eastern Canada, small, non-gregarious and non-migratory animals were trapped. The trade on the Plains resulted in an emphasis upon the buffalo hunt beyond the needs of subsistance and served to strengthen the collective and cooperative techniques traditionally used in the pursuit of migratory herds. Moreover, band cohesion in the Plains was enhanced by acquisition of the horse and gun and by intensification of warfare, the latter carried on in part to obtain horses.

It is possible that a non-stratified society which acquires surplus wealth may develop a class structure, but this involves special conditions not ordinarily

8: Murphy & Steward E-5 (1952-1953) 1956

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found among collectors of wild products. Some of the North American Plains Indians showed an incipient development of a class society in the late eighteenth and early nineteenth centuries, but the tribes were decimated by epidemics and overwhelmed by the advancing frontier when intensified wealth and significant prestige differences had begun to emerge. A parallel between the Plains and the Mundurucu can be found in the increased authority of chiefs owing to their functions as intermediaries between the traders and the Indians. Jablow notes such a florescence of political controls among the Cheyenne [1951, p. 68], and Lewis specifically states of Blackfoot trade [1942, p. 42]:

> "In periods of monopoly [of the Indian trade by one company] the fur trade has a positive effect, that is, it increased the prestige and authority of the chiefs. In periods of competition it has a disruptive effect, that is, it weakened the power of the chiefs."

The Plains band chief traded a commodity which was obtained by collective effort. The Mundurucu chief served as middleman in the pre-rubber period when trade in manioc flour, which was also communally produced, was of primary importance. But he eventually lost his position when individually produced rubber became predominant. The Tenetehara Indians of northeastern Brazil have been in contact with civilization longer than the Mundurucu, but, according to Wagley and Galvao, the village chiefs and extended family heads still have a central role in the trading of collectively produced manioc flour and palm oils [1949, pp. 28-32]. It seems apparent that, lacking some other basis for political authority, it is difficult for leaders to maintain control over trade in individually-produced goods.

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Our formulations, in effect, state that when certain acculturative factors, defined functionally rather than formally, are present, the core of a culture will change in expectable and predictable ways. These formulations assume the concomitancy of certain other preconditions, which, though well worth investigation of themselves, can be regarded as given factors for methodological purposes.

This can best be exemplified in our present cases by reference to the basic, though incompletely explained, acculturative factor common not only to the Mundurucu and Montagnais but to most primitive peoples throughout the world. This factor can be stated simply as follows: When goods manufactured by the industrialized nations with modern technique become available through trade to aboriginal populations, the native people increasingly give up their home crafts in order to devote their efforts to producing specialized cash crops or other trade items in order to obtain more of the industrially made articles. The consequences of this simple though world-wide factor are enormous, even though they vary in local manifestation. The phenomenon is of such a high order of regularity that special explanations must be sought for the few departures from it.

The main hypothesis arising from the present study is that: When the people of an unstratified native society barter wild products found in extensive distribution and obtained through individual effort, the structure of the native culture will be destroyed, and the final culmination will be a culture type characterized by individual families having individual rights to marketable resources and linked to the larger nation through trading centers. Yaqui, Trumai, and no doubt other collectors come under this general statement.

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Notes

2. The tenuous and diverse legal rights of the traders to control of rubber areas has been discussed by Wagley [1953, pp. 91-92].

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